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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,709	11/25/2003	Ram Prabhakar	NVDA-013	6307

7590  
RAM PRABHAKAR  
2079 Edgewood Drive  
Palo Alto, CA 94303

01/24/2008

EXAMINER
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LEE, Y YOUNG

ART UNIT	PAPER NUMBER
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2621

MAIL DATE	DELIVERY MODE
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01/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/721,709

Applicant(s)

PRABHAKAR ET AL.

Examiner

Y. Lee

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/25/03 and 7/2/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant has canceled claims 1-21 and, therefore, the restriction requirement of the last office action is withdrawn.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 23, 32, and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 23 and 34 recite the limitation "said current packet" in line 2. There is insufficient antecedent basis for this limitation in the claims.
5. Claim 32 recites the limitation "said DC predict coefficients" in lines 9-10 and 13. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 32 recites the limitation "said AC predict coefficients" in line 12. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 22-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Youn (7,113,646) in view of Haskell et al (6,341,144).

Youn, in Figure 2, discloses a decoding method of predicted AC coefficients that is substantially the same dynamic AC prediction method as specified in claims 22-39 of the present invention, comprising performing DC prediction 64 for a current macroblock using DC coefficients 62 associated with at least one adjacent macroblock; performing AC Prediction 78 for the current macroblock using AC coefficients associated with at least one adjacent macroblock; determining whether an overflow condition 80 is to occur in a current data packet if the current macroblock is encoded in the current data packet; if no overflow condition is to occur, encoding the current macroblock in the current data packet 66; and if the overflow condition 80 is to occur, encoding the current macroblock 58 in a new data packet (e.g. updated Q).

With respect to claims 23-39, Youn also discloses determining whether the overflow condition 80 is to occur in the current packet prior to performing further AC

prediction 78 for the current macroblock; if the overflow condition is to occur, performing a second DC prediction 64 for the current macroblock (e.g. with updated Q); and suspending further AC prediction (e.g. with same MV) for the current macroblock; wherein performing the DC and AC predictions and determining whether an overflow condition is to occur are performed in a data partition mode (e.g. Fig. 8); if no overflow condition is to occur, determining a predict direction (e.g. motion vectors) associated with the DC prediction and the AC prediction; if the predict direction is determined to be horizontal or vertical, generating a signal for performing an alternate-horizontal or alternate-vertical scan (e.g. Fig. 4); if the overflow condition is to occur, generating a signal for performing a zig-zag scan 63; wherein the DC coefficients and the AC coefficients comprise a transform coefficient data set generated using a discrete cosine transform 56; before determining whether the overflow condition is to occur, determining a macroblock type (e.g. I or non-I) of the current macroblock 52; if the current macroblock comprises an inter block (e.g. non-I), supplying the AC coefficients and the DC coefficients for encoding the current macroblock in the current data packet 66; if the current macroblock comprises an intra block (e.g. I), determining an AC prediction mode status (e.g. no motion vector) associated with the AC prediction; if the AC prediction is disabled 54, supplying the AC coefficients and the DC predict coefficients for encoding the current macroblock 66 in the current data packet (e.g. no feedback prediction necessary); and if the AC prediction is enabled (e.g. non-I), supplying the AC predict coefficients 54 and the DC predict coefficients 64 for encoding the current macroblock in the current data packet (e.g. prediction coding of non-I blocks).

Although Youn discloses using AC and DC coefficients differently for different types of encoding, it is noted Youn differs from the present invention in that it fails to particularly disclose any details of how the predict coefficients are supplied to the encoder as specified in claims 22-39. Haskell et al however, in Figures 3-4, teaches the concept of such well known selective supplying of AC predict coefficients 330 and DC predict coefficients 300; and selective supplying the AC coefficients 340 and the DC predict coefficients 310 for encoding the current macroblock 160.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, having both the references of Youn and Haskell et al before him/her, to exploit the well known alternative AC and DC coefficients utilization options as taught by Haskell et al in the dynamic AC prediction method of Youn in order to perform prediction of image information without any need for overhead information.

### ***Conclusion***

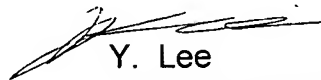
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Y. Lee whose telephone number is (571) 272-7334. The examiner can normally be reached on (571) 272-7334.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Y. Lee  
Primary Examiner  
Art Unit 2621

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